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## Heart Failure and Cardiomyopathies

### RV FRACTIONAL AREA CHANGE AT 6 MONTHS BUT NOT AT PRE-IMPLANT IS ASSOCIATED WITH LATE INDICES OF FUNCTIONAL CAPACITY AND RENAL FUNCTION: A CASE FOR THE IMPORTANCE OF LATE RV DYSFUNCTION IN LONG TERM MCS

Moderated Poster Contributions

Hall C

Saturday, March 29, 2014, 4:00 p.m.-4:15 p.m.

Session Title: Heart Failure and Cardiomyopathies II

Abstract Category: 14. Heart Failure and Cardiomyopathies: Therapy

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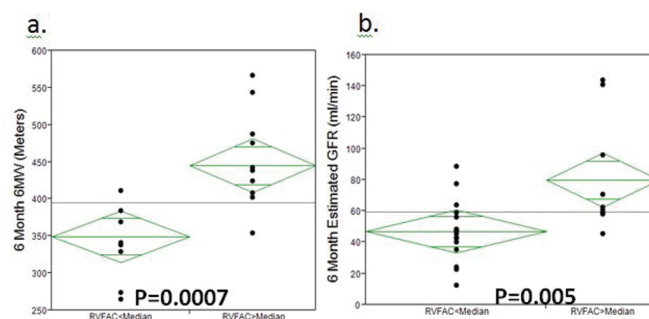
**Background:** Right heart failure (RHF) post - LVAD implantation continues to present a great challenge in the perioperative period. However few studies address the importance of right ventricular function (RVF) in the later phases of mechanical support. We hypothesized that late RVF, as measured by RV Fractional area change (RVFAC) would be associated with clinically important indices of end-organ viability.

**Methods:** In this retrospective study, RVF was quantitatively analyzed by a core lab in paired pre-implant and post-implant (6 month to 1 year) echocardiograms in patients who underwent LV-continuous flow device support as Destination Therapy. Long term data on 6 MW (meters) and renal function (MDRD GFR) were retrospectively abstracted in this patient population.

**Results:** A total 70 patients were included in the study. The median RVFAC at 6 months was 28% (Interquartile Range 0.24, 0.34), significantly increased compared to the median pre-implant RVFAC (22%, IQR 0.19, 0.29). Patients with 6 month post-implant RVFAC>median had a higher 6MW performance and higher GFR compared to patients with a 6 month RVFAC<median ( $p=0.0007$  and  $0.005$ , respectively). There was no difference in the GFR or functional capacity measured at 6 months post-implant among patients with pre-implant RVFAC above or below median.

**Conclusion:** We describe the first study linking a late assessment of RV function to functional capacity and renal function in the later phase of mechanical circulatory support.

Figure 1: 6 Minutes Walk and GFR measured 6 month after the implantation among patients with normal RVF and RHF measure 6 month after the implantation



RVFAC at 6 Months